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Counter track joint

Abstract

A constant velocity universal ball joint consisting of an outer joint part with outer ball tracks, an inner joint part with inner ball tracks, torque transmitting balls guided in pairs of tracks formed of one outer ball track and one inner ball track, an annular ball cage held between the outer joint part and the inner joint part and having circumferentially distributed cage windows each receiving one of the balls, the ball cage forms an inner face which is internally widened between two end apertures of the ball cage, the inner joint part comprises a greatest outer diameter which is greater than each of the inner diameters of the end apertures of the ball cage, adjoining inner ball tracks of the inner joint part form webs whose axial length is greater than the circumferential extension of the cage windows of the ball cage, the ball cage can be elastically ovalised to the extent that, when the axes of the ball cage and of the inner joint part intersect one another approximately perpendicularly upon contact between a web of the inner joint part and the inner face of the ball cage, the opposed web of the inner joint part is able to pass through an end aperture.

Figure 1